



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/042237 A1

(51) International Patent Classification⁷: **B29D 30/00,**
B29C 35/08

(21) International Application Number:
PCT/IB2003/004790

(22) International Filing Date: 29 October 2003 (29.10.2003)

(25) Filing Language: Italian

(26) Publication Language: English

(71) Applicant (for all designated States except US): **PIRELLI PNEUMATICI S.p.A.** [IT/IT]; 222, Viale Sarca, I-20126 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CARETTA, Renato** [IT/IT]; c/o PIRELLI PNEUMATICI S.p.A, 222, Viale Sarca, I-20126 Milano (IT). **MARCHINI, Maurizio** [IT/IT]; c/o PIRELLI PNEUMATICI S.p.A, Viale Sarca, 222, I-20126 Milano (IT).

(74) Agents: **GIANNESI, Pier, Giovanni et al.;** Pirelli & C. S.p.A., 222, Viale Sarca, I-20126 Milano (IT).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

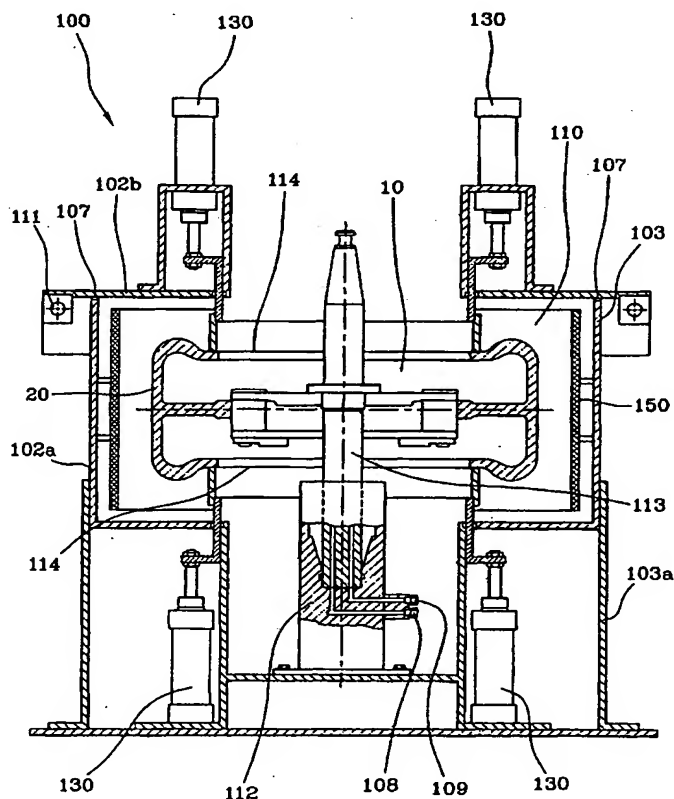
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: METHOD AND PLANT FOR MANUFACTURING A PNEUMATIC TYRE FOR VEHICLE WHEELS



(57) Abstract: It is disclosed a method of making pneumatic tyres for vehicle wheels in which during building of the tyre on a toroidal support (10) at least one step of partial vulcanisation is introduced, said step enabling the overall production time to be reduced by lowering the overall time of the final moulding and vulcanisation step, while maintaining the features of the bead and the carcass ply/plies linked thereto as stated in the design specifications. More particularly, by building at least one carcass structure on said toroidal support (10) and submitting the latter to a first vulcanisation step while exerting a pressure from the outside to the inside of the structure itself, an at least partly vulcanised carcass structure is obtained that is stable in its geometry and suitable for completing the tyre building. Subsequently, a second vulcanisation step accompanied by moulding of the tread band and the sidewalls allows a finished tyre in a more reduced overall period of time to be obtained.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.